

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Cancelled).
2. (Currently Amended) A handwriting recognition system as ~~elaimed~~ in claim ~~4~~5, in which the classifier uses a hidden Markov model for comparison purposes.
3. (Currently Amended) A handwriting recognition system as ~~elaimed~~ in claim ~~4~~5, in which the sampling means, filtering means and classifier are implemented in a digital computer environment.
4. (Currently Amended) A method of ~~analysing~~analyzing signals from a moving handheld device, the method comprising:
  - sampling signals at a predetermined rate,
  - passing signals through a bandpass filter to remove dc level and ~~excess~~  
~~acceleration~~high frequency components,
  - sampling the filtered output to provide a series of vectors representing the position of the handheld device at periodic intervals; and
  - using a classifier to compare the sample sets with predetermined templates to determine the character for output.
5. (New) A handwriting recognition system comprising:

a stylus including at least one accelerometer to detect acceleration of the stylus with respect to gravitational pull and to provide analog signals representative of movement of the stylus;

a signal sampler responsive to the analog signals to derive a plurality of signal streams therefrom at a predetermined sampling rate, respective ones of said plurality of signal streams respectively representing acceleration of the stylus in at least an x-axis channel and a y-axis channel;

a bandpass filter acting upon the signal streams to remove low frequency and constant components caused by fixed angular gravitational pull on the stylus and to remove high frequency components caused by operator instability to provide a corresponding plurality of signal streams representing only wanted acceleration components; and

a classifier acting on the corresponding plurality of signal streams to produce data defining alpha-numeric characters.

6. (New) A handwriting recognition system as in claim 5 in which the stylus includes a switch which controls the signal sampler so that sampling occurs only when the switch indicates that the operator intends writing.

7. (New) A handwriting recognition system comprising:

a stylus including two accelerometers respectively detecting acceleration of the stylus with respect to gravity in an x-axis and a y-axis direction and providing respective

analogue signals representative of acceleration of the stylus in the x-axis and the y-axis direction;

a signal sampler acting upon the respective analog signal streams to derive a respective plurality of signal streams therefrom at a predetermined sampling rate:

a bandpass filter acting upon the plurality of signal streams to remove low frequency and constant components caused by fixed angular gravitational pull on the stylus and to remove high frequency components caused by operator instability to provide a corresponding plurality of signal streams representing only wanted acceleration components; and

a classifier acting on the corresponding plurality of signal streams to produce data defining alpha numeric characters.

8. (New) A handwriting recognition system as in claim 7 in which the classifier uses a hidden Markov model for comparison purposes.
9. (New) A handwriting recognition system as in claim 7 in which the signal sampler, bandpass filter and classifier are implemented in a digital computer.
10. (New) A handwriting recognition system as in claim 7 in which the stylus includes a switch which controls the signal sampler so that sampling occurs only when the switch indicates that the operator intends writing.
11. (New) A handwriting recognition system as in claim 2, in which the sampling means, filtering means and classifier are implemented in a digital computer environment.

12. (New) A handwriting recognition system as in claim 2 in which the stylus includes a switch which controls the signal sampler so that sampling occurs only when the switch indicates that the operator intends writing.

13. (New) A handwriting recognition system as in claim 8 in which the signal sampler, bandpass filter and classifier are implemented in a digital computer.

14. (New) A handwriting recognition system as in claim 8 which the stylus includes a switch which controls the signal sampler so that sampling occurs only when the switch indicates that the operator intends writing.

15. (New) A method for processing accelerometer signals from a handheld movable electronic writing device, said method comprising:

bandpass filtering said accelerometer signals to reduce (a) dc components caused by gravity and (b) high frequency components caused by operator instability; and

thereafter analyzing the resulting bandpass-filtered signals to determine a recognized electronic writing output.

16. (New) Apparatus for processing accelerometer signals from a handheld movable electronic writing device, said method comprising:

a bandpass filter arranged to process said accelerometer signals by reducing (a) dc components caused by gravity and (b) high frequency components caused by operator instability; and

signal analyzing and recognition structure arranged to analyze the resulting bandpass filtered signals to determine a recognized electronic writing output.